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Job No: CTCE/BBMP/Wno.15/KRIDL/BM/Stripping/2014-15 28.10.2014

Stripping Value of Road Aggregates (Static Immersion Test)

IS: 6241

Client	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the work	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
Reference	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Type of Mix	Bituminous Macadam
Date of Testing	28.10.2014

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Type of binder : 60/70
Percentage of binder used : 5.0% by wt.
Total weight of aggregate : 200 g
Total weight of binder : 10.0 g
Temperature of water-bath : 40° C

Observation Number	Stripping, Percentage	Average, Percentage	Average Retained Coating, %
1	3.2	3.23	96.77
2	3.1		
3	3.4		

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Comments:

→ Minimum allowable Aggregate retained coating for Bituminous Macadam is 95%

Note:

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Job No: CTCE/BBMP/Wno.15/KRIDL/BM/Sp_Wa/2014-15 28.10.2014

Specific Gravity And Water Absorption Test

IS: 2386 Part III

Client	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
Reference	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Source / Location	Hotmix Plant, Bangalore.
Type of Mix	Bituminous Macadam
Date of Testing	28.10.2014

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 2	
1	Weight of aggregate suspended in water with the basket	W_1 g	2013	2011	2012	
2	Weight of basket suspended in water	W_2 g	750	750	750	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1263	1261	1262	
4	Weight of saturated surface dry aggregate in air	W_3 g	2022	2025	2026	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	759	764	764	
6	Weight of oven dried aggregate	W_4 g	2005	2007	2010	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.642	2.627	2.631	2.636
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.702	2.690	2.687	2.695
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.85%	0.90%	0.80%	0.82%

Comments:

→ Maximum allowable Aggregate Water absorption value for Bituminous Macadam is 2.0%

Note:

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Job No.: CTCE/BBMP/Wno.15/KRIDL/BM/Bitumen/2014-15 28.10.2014

BITUMEN CONTENT DETERMINATION OF BITUMINOUS MACADAM MIX

As per IS2386 and IRC:SP:11-1984

CUSTOMER	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager (West),** KRIDL,Bangalore.
NAME OF THE WORK	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
REFERENCE	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
SAMPLE I/D	Kalasthinagar Chandrashekar house road, Ward No. 15
DATE OF TESTING	28.10.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	483	482
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	17	18.00
7. Bitumen content in %	3.40	3.60
8. Average	3.50	

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Job No.: CTCE/BBMP/Wno.15/KRIDL/BM/Bitumen/2014-15 28.10.2014

GRADATION DETERMINATION OF BITUMINOUS MACADAM MIX

As per IS2386 and IRC:SP:11-1984

CUSTOMER	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager (West),** KRIDL,Bangalore.
NAME OF THE WORK	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP,
REFERENCE	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
SAMPLE I/D	Kalasthinagar Chandrashekar house road, Ward No. 15
DATE OF TESTING	28.10.2014

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-04 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
26.5	0	0	0	100	100
19	42.36	8.77	8.77	91.23	90-100
13.2	92.56	19.16	27.93	72.07	56-88
4.75	263.45	54.54	82.48	17.52	16-36
2.36	15.62	3.23	85.71	14.29	4-19
0.3	31.69	6.56	92.27	7.73	2-10
0.075	15.85	3.28	95.55	4.45	0-8

Þ The results indicated above are based on the tests carried	Trail 2				Specified Limits as per MORTH specification table 500-04 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
26.5	0	0	0	100	100
19	35.96	7.46	7.46	92.54	90-100
13.2	85.45	17.73	25.19	74.81	56-88
4.75	269.78	55.97	81.16	18.84	16-36
2.36	48.15	9.99	91.15	8.85	4-19
0.3	25.95	5.38	96.53	3.47	2-10
.0.075	8.45	1.75	98.29	1.71	0-8

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Job No: CTCE/BBMP/Wno.15/KRIDL/BM/Agg.G/2014-15 28.10.2014

Aggregate Gradation Test

IS : 2386 Part I

Client	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the work	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore
Reference	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Sample ID	Hotmix Plant, Bangalore.
Type of Mix	Bituminous Macadam
Date of Testing	28.10.2014

Total Weight of Sample: 5100 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH specification
19	382	7.49	7.49	92.51	90-100	
13.2	1652	32.39	39.88	60.12	56-88	
4.75	1526	29.92	69.80	30.20	16-36	
2.36	1036	20.31	90.12	9.88	4-19	
0.3	241	4.73	94.84	5.16	2-10	
0.075	126	2.47	97.31	2.69	0-8	

Total Weight of Sample: 5200 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH specification
19	421	8.10	8.10	91.90	90-100	
13.2	1563	30.06	38.15	61.85	56-88	
4.75	1832	35.23	73.38	26.62	16-36	
2.36	986	18.96	92.35	7.65	4-19	
0.3	150	2.88	95.23	4.77	2-10	
0.075	92	1.77	97.00	3.00	0-8	

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Job No.: CTCE/BBMP/Wno.15/KRIDL/QB(SDBC)/2014-15 27.10.2014

TEST REPORT ON DETERMINATION OF BITUMEN CHARACTERISTICS

CLIENT	:	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	:	**Technical Manager (West),** KRIDL, Bangalore.
NAME OF THE WORK	:	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
REFERENCE	:	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
SAMPLE ID	:	Bitumen
DATE OF TESTING	:	27.10.2014

The results of the tests conducted on the bitumen sample.

Sl. No	Description	Test Method as per IS	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	IS :1203 -1978 (RA-2009)	88	80 to 100
2	Softening point, ^{0}C	IS :1205 -1978 (RA-2009)	48	Min. 40
3	Ductility at 27^{0}C, cm	IS :1208 -1978 (RA-2009)	100 >	Min. 75
4	Flash Point, ^{0}C	IS :1209 -1978 (RA-2009)	292	Min. 220

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27.10.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
Reference	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	27.10.2014

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	384	385	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	82	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	302	299	
4	Aggregate Impact value = percent fines	21.35	22.34	
	100* (W_2/W_1)%			21.85

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

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27.10.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
Reference	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	27.10.2014

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	379	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	85	83	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	300	296	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	22.08	21.90	21.99

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

Note:

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Job No.: CTCE/BBMP/Wno.15/KRIDL/SDBC/Shape_T/2014-15 : 27.10.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	: **Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager (West),** KRIDL, Bangalore.
Name of Work	: Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Technical Reference	: IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	: Semi Dense Bituminous Concrete
Date of Testing	: 27.10.2014

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Result : Flakiness Index = **11.69%**

Elongation Index = **13.45%**

Result : Combined Flakiness & Elongation index **25.14%**

Comments:

Maximum allowable Flakiness & Elongation Index for Semi Dense Bituminous Concrete is 30%

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Job No.: CTCE/BBMP/Wno.15/KRIDL/SDBC/Shape_T/2014-15 : 27.10.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	: **Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager (West),** KRIDL, Bangalore.
Name of Work	: Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Technical Reference	: IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	: Semi Dense Bituminous Concrete
Date of Testing	: 27.10.2014

Civil-Tech Consultants & Engineers Bangalore

Result : Flakiness Index = **12.56%**

Elongation Index = **13.13%**

Result : Combined Flakiness & Elongation index **25.69%**

Comments:

Maximum allowable Flakiness & Elongation Index for Semi Dense Bituminous Concrete is 30%

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Job No.: CTCE/BBMP/Wno.15/KRIDL/SDBC/Stripping/2014-15 29.10.2014

Stripping Value of Road Aggregates (Static Immersion Test)

IS: 6241

Client	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the work	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
Reference	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	29.10.2014

Type of binder : 80/100
Percentage of binder used : 5.0% by wt.
Total weight of aggregate : 200 g
Total weight of binder : 10.00 g
Temperature of water-bath : 40° C

Observation Number	Stripping, Percentage	Average, Percentage	Average Retained Coating, %
1	3.5	3.72	96.28
2	3.9		
3	3.8		

Comments:

→ Minimum allowable Aggregate retained coating for Semi Dense Bituminous Concrete is 95%

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Job No.: CTCE/BBMP/Wno.15/KRIDL/SDBC/Sp_Wa/2014-15

29.10.2014

Specific Gravity And Water Absorption Test

IS: 2386 Part III

Client	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
Reference	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Type of Mix	Semi Dense Bituminous Concrete
Source / Location	Hotmix Plant, Bangalore
Date of Testing	29.10.2014

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 3	
1	Weight of aggregate suspended in water with the basket	W_1 g	2012	2013	2014	
2	Weight of basket suspended in water	W_2 g	755	755	755	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1257	1258	1259	
4	Weight of saturated surface dry aggregate in air	W_3 g	2018	2019	2020	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	761	761	761	
6	Weight of oven dried aggregate	W_4 g	2003	2004	2006	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.632	2.633	2.636	2.634
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.685	2.686	2.685	2.686
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.75%	0.75%	0.70%	0.73%

Comments:

→ Maximum allowable Aggregate Water absorption value for Semi Dense Bituminous Concrete is 2.0%

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Job No.: CTCE/BBMP/Wno.15/KRIDL/SDBC/Bitumen/2014-15 29.10.2014

BITUMEN DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AS per IRC : SP : 11 - 1984

CLIENT	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager (West),** KRIDL, Bangalore.
NAME OF THE WORK	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
REFERENCE	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
SAMPLE I/D	Kalasthinagar Chandra Shekar's house road Ward No. 15
DATE OF TESTING	29.10.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474	475
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	26	25.00
7. Bitumen content in %	5.20	5.00
8. Average	**5.10**	

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Job No.: CTCE/BBMP/Wno.15/KRIDL/SDBC/Bitumen/2014-15 29.10.2014

GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS : 2386 and IRC : SP : 11 - 1984

CLIENT	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager (West),** KRIDL, Bangalore.
NAME OF THE WORK	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
REFERENCE	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
SAMPLE I/D	Kalasthinagar Chandra Shekar's house road Ward No. 15
DATE OF TESTING	29.10.2014

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	26.36	5.56	5.56	94.44	90-100
4.75	251.45	53.05	58.61	41.39	35-51
2.36	53.78	11.35	69.96	30.04	24-39
1.18	52.89	11.16	81.11	18.89	15-30
0.3	28.96	6.11	87.22	12.78	9-19
0.075	35.89	7.57	94.80	5.20	3-8

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	34.56	7.28	7.28	92.72	90-100
4.75	258.89	54.50	61.78	38.22	35-51
2.36	54.85	11.55	73.33	26.67	24-39
1.18	43.42	9.14	82.47	17.53	15-30
0.3	26	5.47	87.94	12.06	9-19
0.075	34.12	7.18	95.12	4.88	3-8

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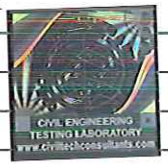
Job No.: CTCE/BBMP/Wno.15/KRIDL/SDBC/AGG/2014-15 29.10.2014

Aggregate Gradation Test

IS : 2386 Part I

Client	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
Reference	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete (SDBC)
Date of Testing	29.10.2014



Total Weight of Sample: **5100** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
13.2	0	0.0	0	100	100	Gradation satisfies Grade-II MORTH specification
9.5	392	7.7	7.69	92.31	90-100	
4.75	2653	52.0	59.71	40.29	35-51	
2.36	712	14.0	73.67	26.33	24-39	
1.18	510	10.0	83.67	16.33	15-30	
0.3	312	6.1	89.78	10.22	9-19	
0.075	251	4.9	94.71	5.29	3-8	

Total Weight of Sample: **5250** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
13.2	0	0.0	0	100	100	Gradation satisfies Grade-II MORTH specification
9.5	258	4.9	4.91	95.09	90-100	
4.75	2563	48.8	53.73	46.27	35-51	
2.36	836	15.9	69.66	30.34	24-39	
1.18	512	9.8	79.41	20.59	15-30	
0.3	349	6.6	86.06	13.94	9-19	
0.075	412	7.8	93.90	6.10	3-8	

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29.10.2014

Aggregate Gradation Test

IS : 2386 Part I

Client	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
Reference	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete (SDBC)
Date of Testing	29.10.2014

Total Weight of Sample: **5250** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
13.2	0	0.0	0	100	100	Gradation satisfies Grade-II MORTH specification
9.5	389	7.4	7.41	92.59	90-100	
4.75	2653	50.5	57.94	42.06	35-51	
2.36	710	13.5	71.47	28.53	24-39	
1.18	512	9.8	81.22	18.78	15-30	
0.3	311	5.9	87.14	12.86	9-19	
0.075	298	5.7	92.82	7.18	3-8	

Total Weight of Sample: **5125** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
13.2	0	0.0	0	100	100	Gradation satisfies Grade-II MORTH specification
9.5	256	5.0	5.00	95.00	90-100	
4.75	2563	50.0	55.00	45.00	35-51	
2.36	834	16.3	71.28	28.72	24-39	
1.18	511	10.0	81.25	18.75	15-30	
0.3	349	6.8	88.06	11.94	9-19	
0.075	399	7.8	95.84	4.16	3-8	

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Job No.: CTCE/BBMP/Wno.15/KRIDL/SDBC/Stability/2014-15 29.10.2014

TEST REPORT ON STABILITY OF MIX

Client	:	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
Name of the work	:	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Source of location	:	Hot mix Plant, Bangalore
Type of Mix	:	Semi Dense Bituminous Concrete
Date of Testing	:	29.10.2014

The results of the tests conducted on the bituminous mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-16)
1	Marshal Stability, at 60° C, Kn	8.40	9.20	8.2 Kn (min)
2	Marshal flow at 60° C, mm	2.60	2.43	2 – 4
3	Percent air voids	3.16	4.58	3 – 5
4	Percent voids in mineral aggregates (VMA %)	14.75	14.30	13 - 15
5	Percent voids filled with Bitumen (VFB %)	72.50	73.15	65 – 78
6	Density, g/cc	2.27	2.26	---

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TEST REPORT ON STABILITY OF MIX

Client	:	**Asst. Executive Engineer,** T.Dasarahalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
Name of the work	:	Improvements and Asphalting to Kalasthinagar Chandra Shekar's house road and Cinema tent side road in Dasarahalli in Ward No. 15, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated : 06.10.2014
Source of location	:	Hot mix Plant, Bangalore
Type of Mix	:	Semi Dense Bituminous Concrete
Date of Testing	:	29.10.2014

The results of the tests conducted on the bituminous mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-16)
1	Marshal Stability, at 60° C, Kn	8.65	8.95	8.2 Kn (min)
2	Marshal flow at 60° C, mm	2.60	2.43	2 – 4
3	Percent air voids	3.16	4.58	3 – 5
4	Percent voids in mineral aggregates (VMA %)	14.75	14.30	13 - 15
5	Percent voids filled with Bitumen (VFB %)	72.50	73.15	65 – 78
6	Density, g/cc	2.27	2.28	---

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